3

In the Claims:

- 1. Claims 1-26 (canceled)
- 27. (new) A method for detecting and notifying that a child has been abandoned in a vehicle, comprising:
 - providing an occupant detection and notification system for installation in a vehicle, said occupant detection and notification system further comprising:

 a child car seat being attachable in a seat of a vehicle, said child car seat having a safety belt means for securing a child, said child car seat further having a built-in seat cushion pressure switch means, said pressure switch means being enabled when a child occupies said child car seat;
 - a micro-controller unit for controlling said vehicle occupant detection and notification system attachable to said child car seat, said micro-controller unit being operable to monitor said micro-controller unit's inputs from multiple sensors within a vehicle and to provide output enabling signals to alarms mounted internally and/or externally to said vehicle;
 - a door switch being mountable on at least the driver's door of said vehicle, the output signal from said door switch being routable to one of said inputs of said micro-controller unit for indicating when said door is open;

- an inside vehicle temperature sensor, the output signal from said inside temperature sensor being routable to an additional input of said microcontroller unit for determining when the temperature inside said vehicle falls above or below a predetermined safe temperature range; an internal vehicle alarm being mountable in said vehicle for reminding responsible occupants of said vehicle that a child is in said child car seat and a door of said vehicle is open, said internal vehicle alarm being enabled by an output signal from said micro-controller unit; a high-volume audible external vehicle alarm, said external vehicle alarm being enabled by an output of said micro-controller unit when a child is in said car seat and the inside temperature of said vehicle is outside of said predetermined safe temperate range, said external alarm being reset when said child is removed from said child car seat or manually; and a wiring harness for routing signal wires from said seat cushion pressure switch means of said child car seat, said door switches, said inside temperature sensor, and vehicle's power and chassis ground to inputs of
- switch means of said child car seat, said door switches, said inside

 temperature sensor, and vehicle's power and chassis ground to inputs of
 said micro-controller unit, and from said micro-controller unit outputs to
 said internal vehicle alarm and said high volume audible external alarm,
 said wiring harness wires having a mating connector means; and
 sequentially performing the step-by-step operational functions of said system
 according to the sequential steps, comprised of:

- step 1, determining when a child occupies said child car seat, by means of monitoring the state of said cushion pressure switch;
- step 2, enabling said system once responsible occupants are in said vehicle and all doors are closed, by means of monitoring the state of said door switch(es);
- step 3, detecting when a door of said vehicle is opened, by means of monitoring the state of said door switch(es);
- step 4, enabling an internal audible alarm or voice message stating that said child is in said child car seat, by means of an output enabling signal from said micro-controller unit;
- step 5, inhibiting said system if said child is removed from said child car seat,

 determined by monitoring the state of said cushion pressure switch;

 otherwise, if said child is left unattended in said child car seat:
- step 6, sensing the internal temperature inside said vehicle if said child is left in said child car seat inside said vehicle, by means of monitoring said inside vehicle temperature sensor;
- step 7, triggering said external vehicle alarm until someone comes to the aid of said child when vehicle inside temperature reaches an unsafe temperature, by means of by means of an output enabling signal from said micro-controller unit; and
- step 8, resetting said system when said child is safely removed from said vehicle.

6

- 28. (new) The method of claim 27, wherein said seat cushion is a separate removable cushion with built-in pressure switch means for retrofitting in an existing child car seat, said separate removable seat cushion being securely affixed to said child seat by attaching means.
- 29. (new) The method of claim 27, wherein said micro-controller unit is an integral part of said child car seat.
- 30. (new) The method of claim 27, wherein said wiring harness supplies signals from a plurality of child car seats to multiple inputs of said micro-controller.
- 31. (new) A method for detecting and notifying that a child has been abandoned in a vehicle, comprising:

providing a child detection and notification system in combination with a vehicle, said child detection and notification system further comprising;

- a child car seat being attached in a seat of said vehicle, said child car seat having a safety belt means for securing a child, said child car seat further having a built-in seat cushion with pressure switch means, said pressure switch means being enabled when a child occupies said child car seat;
- a micro-controller unit for controlling said vehicle occupant detection and notification system, said micro-controller unit being operable to monitor said micro-controller unit's inputs from multiple sensors within a vehicle

7

and to provide output enabling signals to internal and external vehicle alarms;

- signals from at least the vehicle's driver-side front passenger door switch routed to an input of said micro-controller unit for indicating when one or more doors are open;
- an inside vehicle temperature sensor, the output signal from said inside
 temperature sensor being routable to an additional input of said microcontroller unit for determining when the temperature inside said vehicle
 falls above or below a predetermined safe temperature range;
- an internal vehicle alarm mounted in said vehicle for reminding responsible occupants of said vehicle, when a child is in said child car seat and a door of said vehicle is open, that a child is in said child car seat, said internal vehicle alarm being enabled by an output signal from said micro-controller unit;
- a high-volume audible external vehicle alarm, said external vehicle alarm
 being enabled by an output of said micro-controller unit when a child is in
 said car seat and the inside temperature of said vehicle is outside of said
 predetermined safe temperate range, said external alarm being reset when
 said child is removed from said child car seat or manually; and
- a wiring harness routing signal wires from said seat cushion pressure switch means of said child car seat, said door switches, said inside temperature

8

sensor, and vehicle's power and chassis ground to inputs of said microcontroller unit, and from said micro-controller unit outputs to said internal
vehicle alarm and said high volume audible external alarm, said wiring
harness wires having a mating connector means; and

- sequentially performing the step-by-step operational functions of said system according to the sequential steps, comprised of:
- step 1, determining when a child occupies said child car seat, by means of monitoring the state of said cushion pressure switch;
- step 2, enabling said system once responsible occupants are in said vehicle and all doors are closed, by means of monitoring the state of said door switch(es);
- step 3, detecting when a door of said vehicle is opened, by means of monitoring the state of said door switch(es);
- step 4, enabling an internal audible alarm or voice message stating that said child is in said child car seat, by means of an output enabling signal from said micro-controller unit;
- step 5, inhibiting said system if said child is removed from said child car seat,
 determined by monitoring the state of said cushion pressure switch;
 otherwise, if said child is left unattended in said child car seat:
- step 6, sensing the internal temperature inside said vehicle if said child is left in said child car seat inside said vehicle, by means of monitoring said inside vehicle temperature sensor;

- step 7, triggering said external vehicle alarm until someone comes to the aid of said child when vehicle inside temperature reaches an unsafe temperature, by means of an output enabling signal from said micro-controller unit; and step 8, resetting said system when said child is safely removed from said vehicle.
- 32. (new) The method of claim 31, wherein said micro-controller unit is an integral part of said child car seat.
- 33. (new) The method of claim 31, wherein the micro-controller unit functions are provided by a controller of said vehicle's built-in electrical system.
- 34. (new) The method of claim 31, wherein the output signal from a temperature sensor inside said vehicle is coupled to an additional input of said microcontroller unit for determining when the temperature inside said vehicle falls above or below a predetermined safe temperature range.
- 35. (new) The method of claim 31, wherein said external vehicle alarm is said vehicle's existing security alarm.

- 36. (new) The method of claim 31, wherein said internal vehicle alarm is said vehicle's beeper normally used to indicate that the lights are on or that the keys are in the ignition.
- 37. (new) The method of claim 31, wherein said seat cushion is a separate removable cushion with built-in pressure switch means for retrofitting in an existing child car seat, said separate removable seat cushion being securely affixed to said child seat by attaching means.